

**Natrix piscator** Schneider.

Seen in Mutha-Mula river. 1 juvenile caught at Khandala 17-6-45; 10 supralabials 5th and 6th meet eye, left side 6 infralabials meet anterior genial. V 167, umbilical scar 147-149, C 77.

**Macropisthodon plumbicolor** Cantor.

Appears to be moderately common. 1 ♀, 787 mm. (body 692 tail 95 +) was found on the hillside 5-6-45 during the dry weather. It contained 10 eggs. In the mouth and throat were 4 nematodes 30 or 40 mm. long. Perhaps they upset the snake and caused it to come out before the rain.

**Bungarus caeruleus** Schneider.

1 juvenile 30-6-45, length 320 mm. (body 277 tail 43). V 210 umbilical scar 190-193 C 48.

**Naja naja** L.

1 specimen, 21-10-45.

**Vipera russelli** Shaw.

1 juvenile, 17-6-45, length 273 mm. (body 324 tail 39).

**Echis carinatus** Schneider.

1 specimen, ♀, 21-6-45.

## A FURTHER NOTE ON THE BEARDED PIG IN MALAYA

BY

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*(With a text map)*

The Bearded Pig, *Sus barbatus* Müll., was described from a specimen taken in the Banjermasin district of south Borneo. It would appear to be plentiful in suitable areas over at least the greater part of the island, and, unless the much debated *Sus gargantua* Mill. is valid, is the only pig occurring there. Another Bearded Pig, *Sus oi* Mill., at present regarded as a western race of the Borneo animal, was described in 1902 from a single specimen taken on the Indragiri River, in Sumatra. It is now known to be fairly plentiful in parts of the country, particularly the north-eastern section. It has also been recorded from several of the islands in the Rhio Archipelago (Batam, Bintang, Durian, Galang, Kundur, Sauh and Ungar), immediately to the south of the Malay Peninsula.<sup>1</sup>

There are a number of animals, of which the most conspicuous and best-known is probably the Orang-Utan, *Pongo pygmaeus* (Linn.), which occur in Sumatra and Borneo, but are absent from the Malay Peninsula. In general the faunas of the two islands show a considerable affinity, and to some extent they are distinct from that of the tongue of mainland running down between them. On general principles, it was therefore assumed that the Bearded Pig would not

<sup>1</sup> *Sus baybatus* Müller, Tijdsch. nat. geschied. physiol. v. (1 and 2), 1838, p. 149: Banjermasin, south Borneo.

*Sus oi* Miller, Proc. Biol. Soc. Wash., xv, 1902, p. 51: Indragiri, east Sumatra.

*Sus gargantua* Miller, Proc. U.S. Nat. Mus. xxx, 1906, p. 743: south-east Borneo.

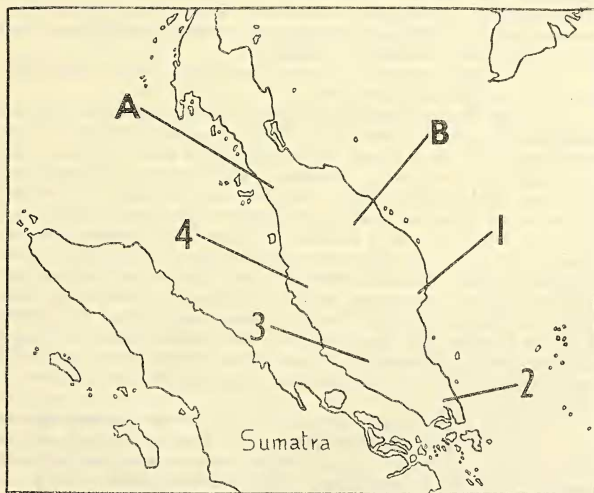
Revisions, see: Jentink, Notes Leyden Museum, xxvi, 1905: Miller, Proc. U. S. Nat. Mus. xxx, 1906, p. 737: Boden Kloss, Journal Straits Branch Royal Asiat. Soc., No. 83, 1921, p. 147; Tucker, Proc. Zool. Soc., 1931, p. 491.

be found naturally feral in Malaya. When the first specimens came to light various ingenious explanations were put forward to account for their arrival from one of the islands. These are summarised well by Mr. J. E. Kempe in a previous number of this Journal (Kempe, 1946 : 281-285), but unfortunately the author leaves the impression that there may still be some doubt about the animal's status in the Peninsula. Actually the official view was given in 1940, when the late F. N. Chasen, then Director of the Raffles Museum, wrote 'there is . . . now no need to assume an extra-limital origin for the few much discussed Malayan specimens recently shot in Pahang and Johore' (Chasen, 1940 : 192, footnote No. 2).

During the course of his paper Mr. Kempe quotes four of the published records of the occurrence of *Sus barbatus* in the Malay Peninsula. There are actually a further three references which he overlooked, and a most important additional record has been established recently by specimens taken in 1947. It would therefore seem to be of interest to summarise the data now available, and to show in total the evidence on which it can be taken that the Bearded Pig is definitely indigenous to the Malay Peninsula, and still present on both sides of the main mountain chain.

#### NEOLITHIC RECORDS

Two of the records (marked A and B on the accompanying map) are based on the finding of tushes among other animal bones



A map of the Malay Peninsula south of the Isthmus of Kra, showing the areas from which the Bearded Pig, *Sus barbatus* subsp., has been reported. Letters refer to finds among deposits left by neolithic cave-dwellers, and figures to contemporary records. For fuller explanation, see text pp. 633-5.

in material left by neolithic cave-dwellers. I have examined such of the specimens as were brought back to the Raffles Museum. It is not possible to assign them definitely to one or other of the two races at present recognized, but there would seem to be no doubt that they are from a *Sus barbatus* subsp. The sites from which they were obtained are,

- (A) Bukit Chuping, Perlis. Excavated by Mr. H. D. Collings in March, 1936, (Collings, 1937 : p. 98).
- (B) Gua Madu, Kelantan. Excavated by Mr. M. W. F. Tweedie in July and August, 1939 (Tweedie, 1940 : p. 7).

It will be seen that one of these caves is on the west side of the Peninsula, and the other on the east. In both cases tusks of the Bearded Pig were fairly numerous, and nearly as plentiful as those of the Wild Pig, *Sus cristatus* subsp. At the present time the former is certainly the more formidable and wary of the two. There is no reason for assuming that their physiques and temperaments were markedly different 1,500 to 2,000 years ago, and on this evidence it must be taken that a *Sus barbatus* subsp. was plentiful over northern Malaya, at least, during this period.

#### CONTEMPORARY RECORDS

The contemporary records now available come from four areas (marked 1 to 4 on the accompanying map), again covering both coastal plains. At best the differences between the Bornean and Sumatran races of living pigs are slight. If they are acceptable, the material so far collected under the present category should be ascribed to the Sumatran *Sus barbatus* of Miller.

The four areas, listed in the chronological order in which the records were first published, are,

- (1) The Pekan District of Pahang. The first specimen obtained from here was a sow killed by Dr. W. S. Leicester in 1918. Three years later Mr. J. E. Kempe, M.C.S., obtained a skull of a boar taken by a Chinese towkay in the same neighbourhood (Moulton and Robinson, 1922 : pp. 202-203). There is now no trace of the former in the Raffles Museum reference collection. It does, however, still contain a fine boar's skull labelled 'Pahang 1922' which, from correspondence with Mr. Kempe, would appear to be the example obtained in 1921. Several other Bearded Pigs are said to have been shot in this area subsequently, but unfortunately there is no formal record of them. In 1926 Dr. W. Linehan, M.C.S., told Mr. Boden Kloss in a letter that about ten had been killed the previous year, and enclosed a photograph of one of the dead animals, but he left the district before he could obtain any specimens (*vide* Kloss, B. 1931 : p. 104).
- (2) The Kota Tinggi district of Johore. Several examples are said to have been taken in this area in the nineteen-thirties, and on one occasion a collector from the Raffles Museum was treed for more than an hour by an old boar. Unfortunately there is only one formal record, a fine head presented to the Museum by Mr. G. B. Reginato in 1934.

(3) In addition to the animals from the Kota Tinggi area, there is also an unconfirmed record of the Bearded Pig from the

neighbourhood of Genuang, near Segamat, some 85 miles north-west of Kota Tinggi, on the west side of the Peninsula. In 1935 the late F. N. Chasen was in correspondence with a planter, Mr. H. E. Burgess, who described pig which had visited his estate about 1911 and 1913, which would seem to be of this species. Mr. Burgess's account of the animals was subsequently published in this Journal (1936 : pp. 253-254).

(4) The Ulu Bernam district of Perak. More recently there have been reports of a peculiar pig in this neighbourhood, and in August, 1947, an old boar was shot, and the skull sent to the Selangor Museum. Four months later, in December, a much younger animal was taken, and the skull and skin preserved. Through the courtesy of Mr. H. T. Pagden, Acting Director of Museums, F. M., I have been able to examine both the skulls. They undoubtedly belong to *Sus barbatus oi*, though that of the older animal is peculiar in that it is relatively shorter than the normal run. Pig skulls are, however, subject to considerable variation, and it matches satisfactorily with one of an old boar killed in Sumatra a number of years ago.

#### DISCUSSION

If, as would seem probable, the Bearded Pig was fairly plentiful and widespread in the Malay Peninsula some 1,500 to 2,000 years ago, one would like to know what has happened to it since then. Before the cave tushes were found, when the animal was known only from the few specimens taken and seen round Pekan, in Pahang, and the unsupported record from Genuang, in Western Johore, it was suggested that small numbers might occasionally be finding their way across the water from Borneo or Sumatra, and even that the reported examples might be the relics of a mythical herd liberated for sporting purposes by a Mohammedan Sultan. It might, of course, still be argued that the pig died out in Malaya about a 1,000 to 500 years ago, and that the recent specimens are derived from stock re-introduced by one of these channels. On the whole, however, bearing in mind the diverse places from which it has now been reported, it would seem most likely that it has lingered on in much reduced numbers in a few, isolated spots.

In Borneo the Bearded Pig would appear to be found most frequently in the immediate neighbourhood of rivers, on cultivated ground, and in general open country, in that order of preference. Further it would seem that though it frequently moves through jungle, and may therefore often be seen there, it is actually doing the greater part of its feeding in the open, either in natural clearings or on cultivated ground. Recently I have had an opportunity of discussing the matter with Mr. E. Banks, who was for many years Curator of the Kuching Museum. From this conversation I gathered the impression that it normally inhabits a rather damper and less covered terrain than the wild pig of Malaya.

There is further no doubt that in Sarawak at least the Bearded Pig indulges in irregular migrations or eruptions (Shelford, 1916 : 42-43. Banks, 1931 : 22-23). A particular area may be invaded one season, and then not troubled again for a number of years. Apparently when moving the pigs do so discretely over a wide front, and

in the jungle one normally meets only two or three at a time. When the migrating animals reach a river, they collect in groups ranging from a score or more up to several hundred individuals, either feeding or preparing to cross together.

It is generally accepted that the thick jungle which clothed almost the whole of the interior of the Malay Peninsula until recently, when some of the areas were opened up for the planting of rubber, is of considerable antiquity. But there are grounds for disputing this. Certain of the animals, such as the Selandang, *Bos gaurus hubbacki* Lydd., are much more likely to be relics from the fauna of a more open terrain. It is also difficult to see how the apparently large population of neolithic man can have existed under conditions similar to those occurring a hundred years ago. It would, in fact, seem more likely that the landscape was more open, and the climate drier, at the beginning of the first millennium A.D. If that were so, the spread of the jungle can be taken as the natural consequence of an increase in the annual precipitation. In the intermediate period, there must have been wide areas of fairly open, damp country. One would suggest that then the Bearded Pig, which had found its way into southern Malaya from Sumatra, flourished exceedingly. Cave-dwelling man, on the other hand, may well have found the damp conditions troublesome, and thus begun a decline in numbers which the gradual spread of the dense forests completed. As they extended their range the Bearded Pig, too, was driven back into a few isolated pockets.

In a short note supplied to the editor of the *Malayan Nature Journal* in January, 1948, I suggested that the few specimens recorded from Pekan and Kota Tinggi might represent small, irregular eruptions, comparable to the movements that have been recorded from Borneo, arising from a pocket surviving in the Tasek Bera area of southern Pahang. It is significant that Mr. E. W. Mumford (of the Malayan Police Service), in a letter to Mr. Boden Kloss, said that the Bearded Pig usually arrives in the neighbourhood of Pekan during the monsoon period, from November to April (quoted in Kloss, 1931: p. 104).

The record from Genuang, in north-western Johore (of which I was not then aware), and the specimens from the Ulu Bernam district of Perak, would seem to extend this principle, without affecting its validity as an explanation of the origin of the east coast examples. It would, in fact, seem most likely that the Bearded Pig has survived in Malaya from Neolithic times in a number of small pockets in isolated areas, from which it is erupting at intervals into more densely inhabited ones. It may well be that the attention drawn to it by these recent papers will elicit further formal records. Large numbers of pigs are shot in Malaya each year, but there can be no doubt that very few of them are ever examined critically. A full-grown boar of the Bearded Pig is an unmistakable beast. He is also a most formidable and wary one, and individuals straying into a hunted area might easily elude capture. On the other hand, younger specimens, taken with the ordinary wild pig, though obvious to an interested person, would certainly arouse little attention in a Chinese sportsman shooting for meat, rather than for the benefit of the readers of learned journals.

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A LIST OF BIRDS OBSERVED IN CHITTAGONG,  
E. BENGAL, DURING 1944 AND 1945

BY

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(With a map)

Though this list is primarily one of birds observed in the immediate neighbourhood of Chittagong town some reference is made to observations elsewhere in East Bengal.

The list is necessarily very incomplete due to the period during which it was compiled being abnormal on account of the war and the fact that access to many areas was difficult for a civilian. Secondly only limited time could be devoted to the business of observation. In these circumstances the only territory where intensive observations could be carried out was confined to that immediately round the compiler's bungalow. Elsewhere it was only possible to make casual observations in the course of the day's work.

The period covered by these notes is from April 1944 till January 1945 and from April 1945 till the middle of August 1945.

Chittagong is situated a few miles inland from the sea at the head of the Bay of Bengal on the north bank of the tidal estuary of the river Karnaphuli. A low range of hills running parallel to the coast peters out in a series of hillocks in the middle of the town. Between these hills and the sea is a narrow coastal belt of low-lying